

**PROCEDURE FOR THE CHECKING AND
VERIFICATION OF VOLUME CHANGE (GDT-6)
SHRINKAGE AND SWELL MOLDS AND SWELL STANDS**

A. PURPOSE

These methods are intended to provide instruction for the verification of Volume Change (GDT-6) molds and stands.

B. APPARATUS REQUIRED

1. Calipers capable of reading to 0.001"
2. Calibration blocks: 3.250", 0.252", 0.875" (82.55 mm, 6.35 mm, 22.225 mm)
3. Swell Thickness Measuring Device: This device consists of a one (1.0) inch travel Micrometer Dial, readable and sensitive to one-thousandth (0.001) inch.

C. PROCEDURE

1. Using a caliper, verify the height and diameter of shrinkage mold rings. Check height and diameter. Rotate the ring $\frac{1}{4}$ turn, then check height and diameter. Continue until four (4) readings are obtained. Record the readings on the shrinkage form.
2. Follow the procedures in Step 1, and check the height and diameter of swell mold rings.
3. Shrinkage mold rings that fail to meet the specified height and diameter may be used as swell mold rings, provided that they meet the requirements of swell molds. Molds out of tolerance are to be discarded.
4. Place swell base plate (stand) on a flat level surface. Place and center calibration block on stand. Place Swell Thickness measuring Device on stand, taking care to align the colors on the device to the corresponding colors on the stand's adjusting nut guideposts. Adjust upper adjusting nut until a reading of ZERO is obtained. Tighten lower adjusting nut against upper nut until both nuts on the guidepost are tight. Repeat until both sides of the guideposts are tightened, and a reading of ZERO is obtained on the Swell Thickness Measuring Device.

D. TOLERANCE

The height and diameter requirements for volume change mold rings are specified in GDT-6, Volume Change.

VOLUME CHANGE SWELL RINGS CHECKLIST

Diameter: 3.98 – 4.02 in. (101.09 – 102.11 mm)

Rings out of tolerance are to be discarded.

Swell Mold Rings that fail to meet height and diameter requirements have been discarded and a line drawn through the ring number and dimensions.

VOLUME CHANGE SHRINKAGE RINGS CHECKLIST

Diameter: 3.99 – 4.01 in. (101.35 – 101.85 mm)

Rings out of tolerance are may be used as Swell Rings provided they meet required tolerances.

[illegible]

Shrinkage Mold Rings that fail to meet height and diameter requirements have been changed to Swell Mold Rings or discarded. A line drawn through the ring number and dimensions.

EQUIPMENT VERIFICATION RECORD

Verified By: _____	Date: _____
Equipment: <u>Volume Change Stands</u>	Location (Lab): _____
Identification No.: _____	Verification Frequency: <u>12 months</u>
Previous Verification Date: _____	Next Due Date: _____
Verification Equipment Used:	
Verification Procedure: <u>(In-house) OMR-CVP-28 / GDT-6</u>	

VOLUME CHANGE STANDS CHECKLIST

STAND NO.	INITIAL READING	CORRECTED?

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